

Listing of Claims:

1. (Currently Amended) A method for changing the a data transfer rate used in a certain part of a communications connection, ~~in which method~~ comprising the steps of:

[[-]] choosing a first processing method from a pre-determined set of processing methods;

choosing a first restoration method from a pre-determined set of restoration methods;

processing information is processed (410) using a processing method at a first point of the communications connection[[,]];

transferring the information from the first point to a second point of the communications connection, data transfer rates between the first point and the second point being a first set of data transfer rates;

restoring the information using said first restoration method at the second point of the communications connection;

[[-]] information is processed (440) using a restoration method at a second point of the communications connection[[,]]

changing at least one data transfer rate used between the first point and the second point, the data transfer rates used after changing the at least one data transfer rate between the first point and the second point being a second set of data transfer rates;

defining a set of compatible processing methods, each compatible processing method belonging to said pre-determined set of processing methods, having an output information rate that is lower than or equal to a lowest data transfer rate of said first set of data transfer rates and said second set of data transfer rates, and corresponding with a restoration method that belongs to said pre-determined set of restoration methods;

selecting, prior to changing the at least one data transfer rate, a second processing method from the set of compatible processing methods; and

replacing the first processing method with the second processing method and processing the information using the second processing method.

~~[[-]] the said processing method is chosen (411) from a certain set of processing methods[[,]]~~

~~[[-]] the said restoration method is chosen (441) from a certain set of restoration methods[[,]]~~

~~[[-]] at the borders of consecutive parts, if the communication connection has more than one part between the said first point and second point, the data transfer rates used in adjacent parts are adapted (430) to one another[[,]]~~

~~[[-]] processed information is transferred (401, 402) at first in the said parts at certain first data transfer rates so that each part uses a certain transfer rate, and~~

~~[[-]] in at least one of the said parts the transfer rate used is changed and, after changing the transfer rate, processed information is transferred (403, 404) at certain second data transfer rates, of which there is at least one, characterized in that the method comprises the steps of[[:]]~~

~~[[-]] arranging a set of compatible processing methods to form a subset of the said set of processing methods, which set of compatible processing methods comprises processing methods producing processed information at a rate which is lower than or equal to the lowest of the first and second data transfer rates so that the restoration methods corresponding to the different processing methods belong to the said set of restoration methods, and~~

~~[[-]] selecting (450), prior to changing the data transfer rate, the processing method in use from the set of compatible processing methods[[.]]~~

2. (Currently Amended) A The method according to of claim 1, wherein a set of allowed processing methods is defined for each data transfer rate of the first set of data transfer rates and for each data transfer rate of the second set of data transfer rates and the set of compatible processing methods is arranged so as to include only those processing methods that belong to all sets every set of allowed processing methods.

3. (Currently Amended) A The method according to of claim 1, further comprising the step of:

branching said communications connection to travel simultaneously over both the first route and the second route after use of the second processing method;

wherein ~~[[-]]~~ a route between the first point and the second point points of the communications connection is moved completely or in part from a the first route to a the second route, ~~[[-]]~~ processed the information is transferred on the first route ~~is transferred at using~~ the first data transfer rates, and ~~[[-]]~~ processed the information is transferred on the second route ~~is transferred at using~~ the second data transfer rates~~[[,]]~~ ~~and the method further comprising the step of:~~
~~[[-]]~~ ~~branching said communications connection to travel simultaneously over both routes when the processing method in use has been selected from the set of compatible processing methods.~~

4. (Currently Amended) A ~~The method according to of~~ claim 3, ~~further comprising the step of changing wherein the second processing method is replaced with a third processing method the selected processing method to a second processing method belonging to the set of compatible processing methods during the branching of the communications connection, the third processing method being selected from the set of compatible processing methods.~~

5. (Currently Amended) A ~~The method according to of~~ claim 4, wherein said restoring the information is moved from the second point to a third point of the communications connection and said pre-determined set of restoration methods consists of only restoration methods that are useable at both the second point and the third point ~~said second point is also changed to a third point, where information is processed using a restoration method, and only those restoration methods that can be used at both the second and the third point are included in the set of restoration methods.~~

6. (Currently Amended) A ~~The method according to of~~ claim 4, wherein the information is transferred via a radio path to a wireless terminal located at the said second point, over a radio path and ~~the a radio path part of the first route is different than the radio path part of the second route.~~

7. (Currently Amended) A ~~The method according to~~ of claim 6, wherein ~~said radio path a~~
~~data transfer rate rates are the same on~~ of the radio path part of the first route is equal to a data
transfer rate of the radio path part of the ~~and second route routes[[],]~~ and the data transfer rate is
~~changed in at least a certain part of the communications connection.~~

8. (Currently Amended) A ~~The method according to~~ of claim 6, wherein a data transfer
rate of the radio path part of the first route differs from the data transfer rate of the radio path part
of the second route ~~the radio path data transfer rate of the first route and the radio path data~~
~~transfer rate of the second route are not the same, and~~ data transfer rates in other parts of the first
route are equal to data transfer rates in corresponding parts of the second route, respectively ~~and~~
~~second route the data transfer rates are the same.~~

9. (Currently Amended) A ~~The method according to~~ of claim 1, wherein ~~[-]~~ information
~~is transferred in at least a certain~~ in a part of the communications connection the information is
transferred between the first and second points in ~~inside~~ transmission frames (501, 511, 521, 531,
541) comprising transmission fields (506, 507, 516, 517, 527), said part being between the first
point and the second point, [-] ~~the~~ a data transfer rate in the said part is changed from a first
value to a second value ~~data transfer rate to a second data transfer rate, and [-]~~ the information
is encapsulated in the transmission frames such that some of the transmission fields are empty
when ~~at the data transfer rate in said part which is the greater one is a maximum of the first value~~
~~and the second value data transfer rates in said part, information is transferred so that some of the~~
~~transmission fields (527) are empty.~~

10. (Currently Amended) A ~~The method according to~~ of claim 1, wherein ~~[-]~~ the
~~processed information is transferred in a first two directions~~ direction over a ~~the~~ communications
connection and other information is transferred in a second direction over the communications
connection, using in the first direction of the communications connection ~~a first~~ the second
processing method is used at a ~~the~~ first point of the communications connection and a
~~corresponding restoration method~~ corresponding to the second processing method is used at ~~the a~~
second point of the communications connection, and a second third processing method and a
~~corresponding restoration method~~ corresponding to the third processing method are used in the

second direction of the communications connection, and wherein the third processing method is selected from the set of compatible processing methods ~~[[and -]] before changing the data transfer rate both the processing method used in the first direction and the processing method used in the second direction is selected from the set of compatible processing methods.~~

11. (Currently Amended) A ~~The method according to~~ of claim 10, wherein ~~[[-]]~~ in a part of the communications connection the information is transferred inside transmission frames comprising transmission fields, said part being located between the first point and the second point ~~processed information is transferred in a certain part between the first and second points in transmission frames (601, 611, 621) comprising transmission fields (606, 607, 608, 609),~~ ~~[[and -]]~~ a data transfer rate in the said part is changed from a first value data transfer rate to a second value data transfer rate, and the information is encapsulated in the transmission frames such that some of the transmission fields are empty when the data transfer rate in said part is a maximum of the first value and the second value ~~[[-]]~~ at the data transfer rate which is the greater one of the first and second data transfer rates in said part, information is transferred so that some of the transmission fields (618, 619) are empty.

12. (Currently Amended) A ~~The method according to~~ of claim ~~11~~ 9, wherein the first data transfer rate is higher than the second data transfer rate in said part, and said method further comprising the step of:

~~allocating releasing, after changing the data transfer rate~~[[,]] ~~the empty transmission fields (618, 619) so that they are usable by~~ for use of other communications connections.

13. (Currently Amended) A ~~The method according to~~ of claim 11, wherein the second data transfer rate is higher than the first data transfer rate in said part, and said method further comprising the step of:

~~allocating reserving, before changing the data transfer, rate~~ the empty transmission fields for use of other the said communications connections ~~connection~~.

14. (Currently Amended) A The method according to of claim 1, wherein the second processing method in use is a lossless information processing method.

15. (Currently Amended) A The method according to of claim 14, wherein the second processing method in use is a data transfer rate limiter.

16. (Currently Amended) A The method according to of claim 1, wherein the second processing method in use is a lossy information processing method.

17. (Currently Amended) A The method according to of claim 16, wherein the second processing method in use is a speech compression method.

18. (Currently Amended) A The method according to of claim 16, wherein the second processing method in use is an image compression method.

19. (Currently Amended) A system for changing a data transfer rate used in a part of a ~~communication~~ communications connection, at least one part of said communication connection being a radio path, ~~which system comprises~~ the system comprising:

[[-]] means for determining ~~first~~ data transfer rates being used in parts of a the certain communications connection ~~for transferring processed information, the data transfer rates being used in said parts being a first set of data transfer rates~~;

[[-]] means for determining ~~second~~ data transfer rates to be used next in said parts of the ~~said~~ communications connection, the data transfer rates to be used next in said parts being a second set of data transfer rates;

processing means configured to perform information processing in accordance with a processing method that belongs to a pre-determined set of processing methods;

restoration means configured to perform information restoration in accordance with a restoration method that belongs to a pre-determined set of restoration methods;

first selection means for selecting a first processing method from the pre-determined set of processing methods in accordance with properties of an air interface associated with the radio path and for selecting a first restoration method that corresponds to the first processing method;

~~[[-]] means (201, 205, 207) for selecting processing means used in a certain communications connection from a certain set of processing means in accordance with air interface quality[[,]]~~

~~[[-]] means (202) for selecting restoration means used in the said communications connection from a certain set of restoration means, and~~

~~[[-]] conveying means for conveying configured to convey information about the selected processing means a processing method that belongs to the pre-determined set of processing methods and information about a restoration method that belongs to the pre-determined restoration methods means to certain communications equipment on the a route of the said communications connection[[,]]]; characterized in that it comprises~~

~~[[-]] means for defining providing a subset a set of compatible processing methods, each compatible processing method belonging to said pre-determined set of processing methods, having an output information rate that is lower than or equal to the lowest data transfer rate of said first set of data transfer rates and said second set of data transfer rates, and corresponding to a restoration method that belongs to said pre-determined set of restoration methods; means from the said set of processing means, which subset comprises the processing means which produce processed information at a rate which is smaller than or equal to the lowest of the said first and second data transfer rates so that the restoration means corresponding to the different processing means belong to the said set of restoration means[[,]]~~

~~[[-]] second selection means (701) for selecting, prior to a change from the first set of data transfer rates to a second set of data transfer rates, the a second processing method means from the set of compatible processing methods to be used by the said communications equipment and for selecting a second restoration method, the second restoration method corresponding to the second processing method from the said subset prior to changing the data transfer rate of the said~~

~~communications connection from the first data transfer rates to the second data transfer rates, and for selecting the restoration means corresponding to the processing means.~~

20. (Currently Amended) A The system according to of claim 19, further comprising:

means for transmitting a command that includes at least one of an order to put the second processing method into use and an order to put the second restoration method into use; and

means for receiving information at a first data transfer rate and for transmitting said information at a second data transfer rate;

wherein said means for determining the first set of data transfer rates, said means for determining the second set of data transfer rates, said first selection means and said second selection means. (701) ~~for selecting the processing means from said subset~~ are realized in one network element~~[[,]]~~ ~~said network element further comprising~~

~~[[-]] means for conveying a command to the other communications equipment, which command indicates the processing means and/or restoration means selected, and~~

~~[[-]] means for receiving transferred information at a certain data transfer rate and for transmitting it at a certain second data transfer rate[[.]]~~

21. (Currently Amended) A The system according to of claim 20, wherein the network element further comprising comprises:

means for simultaneously transmitting said information received at a certain original the second data transfer rate to a first destination and at a third data transfer rate to a second destination. two different communications equipment, which means comprises a second means for transmitting information to one of the said communications equipment at the original data transfer rate and to the other one of the said communications equipment at a certain second data transfer rate[[.]]

22. (Currently Amended) A The system in a mobile network according to of claim 19, further comprising:

means for receiving a command that includes at least one of an order to put the second processing method into use and an order to put the second restoration method into use;

wherein said first selection means (201, 205, 207) ~~for selecting processing means,~~ said second selection means and a transmitter of said means ~~for conveying means~~ information are realized in a base station device, (102, 104) and said first selection means ~~for selecting processing means~~ are arranged configured to select perform selections according to radio path quality.[[.]] ~~the base station device further comprising~~

~~[[.]] means for receiving a command which limits the set of processing means to be taken into use to said subset and which cancels the selection of the processing means and/or restoration means according to the radio path quality[[.]]~~

23. (Currently Amended) A The system according to of claim 22, wherein said base station device further comprises:

~~[[.]] means for receiving information at a first receiving rate least at two data transfer rates the second one of which is higher than the first one[[.]];~~

means for receiving said information at the second receiving rate, the second receiving rate being higher than the first receiving rate;

~~[[.]] means for transmitting said information over to a radio path at least at a first transmission rate; and third and fourth data transfer rate, of which the fourth data transfer rate is higher than the third data transfer rate[[.]]~~

means for transmitting said information to the radio path at a second transmission rate, the second transmission rate being higher than the first transmission rate.

~~[[.]] means for receiving at the said second data transfer rate information processed using certain processing means and transmitting over a radio path at the said fourth data transfer rate, and~~

~~[[.]] means for receiving processed information using said processing means at the said first data transfer rate and transmitting at the said fourth radio path data transfer rate[[.]]~~

24. (Currently Amended) A ~~The system according to~~ of claim 23, wherein said base station device is a base station ~~in~~ of a global system for mobile communications (GSM) network and the first transmission rate is a half rate radio interface channel rate and the said ~~fourth data transfer~~ second transmission rate is a full rate radio interface channel rate.

25. (Currently Amended) A ~~The system according to~~ of claim 23, wherein the base station device is a base station device in an universal mobile telecommunications system (UMTS) network.